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FIRST ANNUAL REPORT

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OF

DR. GEORGE BLAND,

Medical Officer of Health,

FOR THE

BOROUGH OF MACCLESFIELD,

CONTAINING THE

VITAL STATISTICS FOR THE YEAR 1873.

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ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

For the year ending December 31st, 1873.

Mr. Chairman and Gentlemen,

In accordance with the regulations of the Local Government Board I have the honour, as your Medical Officer of Health, to submit to you my Annual Report for the year ending December 31, 1873. This Report naturally divides itself into two parts :—1st, an account of the work done by your Sanitary Officers during that portion of the year I was your Officer of Health; and 2ndly, the Vital Statistics of the Borough for 1873.

Part I.

Proceedings taken under the Sanitary and Public Health Acts.

When I entered on my duties as your Medical Officer of Health in June last, my first attention was given to the organisation of a proper system of sanitary inspection, for I found that the provisions of the Sanitary and Public Health Acts and the regulations of the Local Government Board were being either carried out to a very small extent or not at all. The resignation of Mr. Lee, your late Inspector of Nuisances, in September, delayed for some time the adoption of a proper system of sanitary work, but during the following month, when you had appointed Mr. Ridgway your Sanitary Inspector, I was enabled to a certain extent to put into force those wise and beneficent measures which the legislature has provided for the protection of the public health. Although I have not reported the commencement or completion of any extensive sanitary work of a costly nature during the period to which this report refers, yet at the same time a good and useful work has been done in paying great attention to those little local details which make no particular show, or may appear to a superficial observer to be trivial and insignificant, but which when attended to or neglected may constitute the whole difference between a healthy and an unhealthy neighbourhood. Foremost among the means adopted was the house to house visitation of the whole borough, as required by the Provisional Order of the Local Government Board, and which is one of the most important and useful of the Inspector's duties. At present the inquiries are chiefly directed to the sanitary condition of the houses, more especially the back premises, the drainage, and the closet accommodation. The particulars of this sanitary survey are being entered in a series of books, which when completed will, I venture to think be some of the most valuable books possessed by you as the Sanitary Authority of this Borough, as they will form a complete directory of the condition and sanitary state of each house in the town, and will afford the standpoints of reference by which to note the improvements made, and mark the foul spots which need amendment.

Early in November, in consequence of the state of things revealed by the Sanitary Survey, I felt it my duty to call your attention to the insalutary state of Stanley-street and Derby-street, which lying as they do in the centre of the town I thought ought to receive our first consideration. The suggestions which I made in my report for the improvement of these streets met with a cordial reception from you, but owing to a variety of circumstances the sewering and draining operations have not at present been commenced. It is hoped however that both streets will be properly drained and sewered before the end of the present year.

At the same time I drew your attention to the necessity of providing those means of isolation and disinfection without which no town can hope to combat successfully any infectious disease which may appear in an epidemic form. This report was referred to the Sub-committee which you appointed for sanitary purposes, who have had under consideration the various forms of disinfecting stoves, and have visited various sites suggested as being suitable for the erection of such an apparatus. Believing as I do that a Public Mortuary and a disinfecting stove are of paramount importance, and seeing frequently the need of them in this borough, I trust that in my next annual report I may congratulate you on having provided for the use of the inhabitants of this town these two most valuable sanitary appliances.

COMMON LODGING HOUSES.

Knowing that Cholera was once introduced into Macclesfield by a tramp from an infected sea-port, travelling through the town, and there being at that time a fear lest that dreadful plague

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should again visit us, one of the first things to which I as your Officer of Health devoted my attention was the condition of the common lodging houses where the tramps mostly congregate. I found that grave abuses had crept in, that the houses were not properly conducted, that in some cases your regulations were being set aside, that some houses were accomodating more lodgers than they were licensed for, and that others which were virtually common lodging houses were not registered. Mr. Ridgway on his appointment, under my instructions, re-measured the cubic space of each lodging house, issued fresh tickets signifying the number of lodgers allowed in each room; the unregistered houses after being greatly improved were registered, and periodically inspected. There are at present on the register 17 common lodging houses, accomodating 307 lodgers.

SLAUGHTER HOUSES.

There are in the borough 26 registered slaughter houses. All these have been regularly inspected and found to be well conducted.

MEAT INSPECTION.

This has been efficiently performed by Mr. J. O. Hulme, the meat inspector. It has been found necessary on two occasions to solicit magisterial aid.

Abstract of Work done in the Sanitary Department, from June 1*st to December* 31*st*, 1873.

541 Complaints of Nuisances received.
568 Nuisances removed.
13 Privies rebuilt or re-modelled on the new system.
1153 Houses inspected.
31 Houses specially inspected on account of infectious disease.
26 Houses disinfected after infectious disease.
207 Visits to Common Lodging Houses.
245 Visits to Slaughter Houses.
424 Supplies of Lime Wash given to the Poor.
98 Brushes lent for applying the same.
196 Supplies of disinfectants given.
24 Supplies of Vermin killer given.

Few of the complaints were of a grave character. A very large number of the nuisances were removed by the owners of property as soon as their attention was directed to them, and but few objections have been raised to the suggestions of your sanitary officers, for most landlords see that it is to their interest to have their houses in a healthy condition. In no case has it been necessary to institute legal proceedings. The supplies of lime wash were given to the poor, chiefly to those whose houses the Inspector found to be in a dirty state. The gratuitous distribution of lime wash, disinfectants, and vermin killer has been found to be greatly appreciated by the poor, and doubtless has done a proportionate amount of good.

Part II.

The Vital Statistics for the Year 1873.

BIRTHS.

The number of children born alive within the borough of Macclesfield during the year 1873 was 1221, being equal to a birth-rate of 33·4 per thousand. This is below the average for England, which is 35·7 per thousand. The number of births was 265 in excess of the deaths; but in calculating the increase of the population some allowance must be made for emigration and immigration.

DISTRICT BIRTH RATES.

The birth rate varies in the four districts from 40·5 per thousand in Hurdsfield to 30·3 in West Macclesfield. In Sutton and East Macclesfield it is 39·6 and 33·1 per thousand respectively.

QUARTERLY BIRTH RATES.

It has been remarked by the Registrar General that, as a rule, the birth rate for the first quarter of the year is the highest. Macclesfield is no exception to this rule. In the first quarter the births were equal to an annual rate of 38·2 per thousand; in the second quarter 33·0; in the third quarter 29·5; and in the fourth quarter 32·4 per thousand.

SEX.

The birth registers of England have established the fact that more boys are born than girls, the proportion over a series of years being 104 boys to 100 girls. In the borough of Macclesfield 626 of the births were male children, and 595 female children; this makes the proportion 105 boys to 100 girls, so that more than the average number of males have been born. It is singular that the number of male children is proportionately larger among the illegitimate births than among the legitimate.

CHILDREN BORN OUT OF WEDLOCK.

Illegitimate births to the number of 132 were registered during the year, being 10·8 per cent. of the total births. The proportion of illegitimate births in England varies from 3·8 and 3·9 per cent. in the extra-metropolitan parts of Middlesex and Surrey, and 4 per cent. in London to 11·1 in Cumberland; the average for England and Wales being 6·1 per cent. We thus see that although the percentage of illegitimate births in Macclesfield is not the highest in the country, yet it is considerably above the average. Certainly these figures cannot be said to speak favourably of the morality of the borough.

DEATHS.

Deaths to the number of 956 occurred in the borough during the year. The death rate is 26·1 per thousand against 25·0 in the previous year. It is 4·8 per thousand above the average for England for the same period, which is 21·3 per thousand.

DISTRICT MORTALITY.

The borough is for the purposes of these returns divided into four districts: 1st and 2nd,—The registration sub-districts of East and West Macclesfield, which form respectively the east and west portions of the township of Macclesfield, the division being through the centre of the town by way of Jordangate, the Market-place and Mill-street. 3rd,—That portion of the township of Sutton which is within the Municipal boundaries. 4th,—That portion of the Hurdsfield township which is included in the Municipal borough.

Table showing the annual Birth and Death Rates and the Rate of the seven principal Zymotic Diseases per thousand of the living, and the analysis of the mortality in the four districts of the borough. ⁂ In this and other tables due allowance is made for the disturbing influences of the Infirmary, Workhouse and Asylum.

TABLE I.

Districts.	Area in Acres.	Estimated Population 1873.	Rates per 1000.			Percentages to Total Deaths.		
			Births.	Deaths.	Zymotic Diseases.	Children under 12 months old.	People aged 60 years and upwards.	Zymotic Disease.
West Macclesfield...	1716	17238	30·3	23·0	1·3	18·8	36·0	4.8
East Do. ...	881	10520	33·1	25·5	1·9	34·1	24·5	8·0
Sutton..................	360	5140	39·6	31·1	2·3	22·3	26·5	8·3
Hurdsfield	274	3603	40·5	24·0	2·2	30·5	16·4	9·7

Of the four districts, Sutton has the highest death rate, 31·1 per thousand, or 5 per thousand above the average for the whole borough. East Macclesfield comes next with a death rate of 25·5 per thousand, and then Hurdsfield whose rate of mortality is 24·0 per thousand, and lastly West Macclesfield with a death rate of 23·0.

The percentage of infantile deaths to the total deaths is 18·8 in West Macclesfield; 22·3 in Sutton; 30·5 in Hurdsfield; and as high as 34·1 in East Macclesfield.

In West Macclesfield as many as 36·0 per cent. of the deaths are of people aged 60 years and upwards; in Hurdsfield but 16 per cent. attained that age, whilst in East Macclesfield and Sutton the percentages were 24·5 and 26·5 respectively.

The proportion of deaths from the seven principal zymotic diseases was highest in Hurdsfield, where they amounted to 9·7 per cent. of the whole deaths; in Sutton and East Macclesfield they averaged 8 per cent., and in West Macclesfield were as low as 4·8 per cent.

Why should the proportion of infantile deaths be much smaller and the percentage of deaths of old people so much larger in West Macclesfield than in the other districts? Why should the proportion of deaths from zymotic causes be nearly twice as high in Hurdsfield than in the West district? Why should there be so much difference in the mortality of a single town, among a population subject to the same climatic influences, and engaged for the most part in similar pursuits? Is it not because there are more streets well paved and sewered and more houses properly drained in West Macclesfield than in other parts of the borough?

MORTALITY AS TO SEASONS.

(See Tables 2 and 3.)

1st Quarter.—*January, February and March.*

The deaths during this quarter were 242 in number, being equal to an annual death rate of 23·1 per thousand, which is nearly the same as that for England, and is 1·6 per thousand lower than the average of fifty towns of similar size to this. The percentage of infantile deaths, and deaths among old people was highest during this quarter, being 26·3 and 32·5 per cent. respectively; the infantile deaths were 3·0 per cent., and the deaths of aged people 3·6 per cent. above the average for England. 8·9 per cent. of the deaths were due to the chief zymotic diseases, against 12·6 per cent. throughout England. During this quarter Bollington and some other rural parts of the Macclesfield Union suffered severely from Scarlet Fever, but fortunately the borough escaped with merely a few isolated cases. The weather was characterised by frequent changes from warm to cold; the average temperature for the quarter being 39°, or a little above the average for the first quarter of the year. The rain-fall was 5·7 inches, being about a quarter of an inch above the average.

2ND QUARTER.—*April, May and June.*

The number of deaths during this quarter was 271, equal to an annual rate of mortality of 27·7, or 7·3 and 6·0 per thousand higher than the average for England and of the fifty towns similar in size to Macclesfield. The ratio of deaths of infants and aged people was 24·6 and 29·1 per cent. respectively, both being higher than the average for England. The percentage of deaths from the principal zymotic diseases, which was 10·3 per cent. throughout England, was in Macclesfield 5·2 per cent. This quarter the mortality was larger than in the other three quarters, the increase being chiefly among diseases of the respiratory organs. This as I pointed out at the time was due to the unusual coldness of the season, more especially noticed in May. The average temperature was 52°; for April it was 51°; for May 49°; and for June 52°. The rain-fall was 4·7 inches, or one inch less than the average for the quarter.

3RD QUARTER.—*July, August and September.*

231 deaths took place during this quarter, giving an annual death rate of 24·0 per thousand, against 19·4 per thousand the average for England, and 21·0 the average for 50 towns of similar size to this. The proportion of deaths of children under twelve months old was 25·7 per cent. of the total deaths, or 5·1 less than the average for England. The ratio of deaths of people aged 60 years and upwards was 29·2 per cent. or 7·8 in excess of the percentage for the whole of England. Deaths from the chief zymotic diseases, which throughout England were 11·5 per cent. of the whole, deaths were 8·7 per cent. in this borough. During this quarter of the year, diarrhœa is usually prevalent. In Macclesfield 56 per cent. of the deaths from this disease occurred during this period. These deaths were equal to an annual death rate from diarrhœa alone of 2·1 per thousand, which compares favourably with the average for Engand, which is 2·4 per thousand, and with the averages of the 18 largest towns, and of the 50 towns of similar size to this, whose rates are respectively 4·5 and 2·9 per thousand. Up to the middle of July the weather was comparatively cold, but a sudden change took place on the 20th, and three hot days followed, succeeded by a thunderstorm, after which the temperature was changeable,—a few days of cold and a few days of warm

weather alternating. The mean temperature for the quarter was 60°; for July it was 62°; for August 61°; and for September 59°. The amount of rain collected was 7·6 inches, which very nearly agrees with the average for the quarter.

4th Quarter.—*October, November and December.*

During this quarter 212 deaths occurred, which is equal to a mortality rate of 22·1 per 1000 per annum, and is lower than any of the preceding quarters. The proportion of infantile deaths was also less this quarter, being 21·8 per cent. of the total deaths, or 1·9 per cent. below the average for England for the same period. Deaths of people aged 60 years and upwards formed 31·2 per cent. of the deaths, against 25·2 throughout England. The percentage of deaths from the principal zymotic diseases averaged 14·6 per cent. of the deaths throughout England; in Macclesfield it was 5·2 per cent. The weather was at first warm, but during the last week of November and the first week of October it was severely cold; this was followed by comparatively warm weather which continued until the end of the year. The mean temperature for October was 47°; for November 43°; and for December 42°. The rainfall amounted to 5·5 inches, or half-an-inch below the average.

MORTALITY AS TO SEX AND AGE.

(Tables 4, 5 and 6.)

The 956 deaths registered in 1873 comprised 493 or 51·5 per cent. of males, and 463 or 48·5 per cent. of females. Males constitute 49 per cent. and females 51 per cent. of the living population; and the ratio of male deaths to the male population is 27·6 per thousand; of female deaths to the female population 24·8.

Of the total deaths 230 or 24·0 per cent. are children under twelve months old. This is slightly below the average for England, which is 25·0 per cent. Of these 230 infantile deaths 138 or 60 per cent. are males, and 92 or 40 per cent. females. The ratio of deaths of male infants to the total male deaths is 27·9 per cent.; of female infants to the total female deaths 19·8 per cent. It would thus appear to be more difficult to rear male than female children.

Of the deaths at the reproductive age (15-55,) the number of females is in excess of that of males; there being 148 deaths among females at that age against 135 males. So that of the 283 deaths at this period of life, 47·7 per cent. are males and 52·3 per cent. females. The proportion of males dying at the reproductive age to the total number of deaths of that sex is 27·3 per cent., against 31·7 per cent. among the female deaths.

Of the whole deaths 289 or 30·2 per cent. are people of 60 years of age and upwards. This is considerably above the average for England, which is 25·5 per cent. These 289 deaths comprised 150 or 51·9 per cent. males, and 139 or 48·1 per cent. females. 221 persons including 113 males and 108 females were 65 years old and upwards; 83 comprising 41 males and 42 females were 75 years old and upwards; whilst 14 persons—5 males and 9 females—reached or exceeded the age of 85 years. The ratio of males dying aged 60 years and upwards to the total male deaths is 30·4 per cent.; of female deaths at that age to total female deaths 30·0 per cent.

MORTALITY AS TO DISEASE.

(Table 7.)

Class I.—*Zymotic Diseases.*

The borough during 1873 was not visited by any epidemic, although 90 deaths are attributable to zymotic diseases; 64 of which are due to what are commonly called the seven principal zymotic diseases. They are as follows:—

Small Pox	0	Fever	Typhus	3
Measles	3		Enteric	8
Scarlet Fever	5		Continued	4
Diphtheria	1	Diarrhœa		34
Whooping Cough	6			

The locality of each of these deaths I have for reference marked down on a chart which accompanies this report.* The mortality from these seven diseases was at the rate of 1·7 per thousand of the living population, which compares very favourably with the average for the whole of England, which is 2·9 per thousand. Of the other deaths in the miasmatic order, erysipelas takes the lead with five deaths, three of which are children under one year old.

Among the enthetic diseases the deaths of four children are recorded from syphilis, which they had inherited from their parents. It is satisfactory to note that notwithstanding the alarm of canine madness in this neighbourhood, no death has occurred from hydrophobia.

9/- In the dietic order of diseases, two deaths are referred to alcholism. No doubt many other diseases are indirectly the result of drinking to excess, so that we must look upon these two deaths as representing the whole of the fatal effects of drink.

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* Deposited for inspection in the office of the Medical Officer of Health, at the Town Hall.

Class II.—*Constitutional Diseases.*

Among the diathetic diseases 17 deaths are due to cancer and 11 to dropsy. 138 deaths are referred to the tubercular order of diseases; 12 of these deaths are due to hydrocephalus (water on the brain) and tabes mesenterica, which are more particularly the tubercular diseases of childhood; 24 are referred to scrofula; and 102 to phthisis (consumption.) The mortality from this latter disease is greatly in excess of the average for England.

Class III.—*Local Diseases.*

This of all the classes of disease is the most fatal, as it embraces all well-defined local affections. The most fatal order is diseases of the nervous system, to which 185 deaths are attributed. Of these 68 are due to the convulsions of infancy and childhood, 25 to apoplexy, 17 to epilipsy, and 38 to paralysis.

Diseases of the respiratory organs is the next most fatal order in the class of local diseases. To this order are referred 149 deaths, including 99 from bronchitis, 33 from inflammation of the lungs, and 14 from asthma. Of these 149 deaths from lung diseases 28 are children under one year of age.

79 Deaths are due to diseases of the organs of circulation, 75 of which are referred to disease of that important organ of the circulation—the Heart. This disease, like bronchitis, seems to be increasing in this country.

Deaths caused by diseases of the digestive organs are 29 in number, 10 of these being due to liver disease.

Diseases of the urinary organs were not quite so fatal; 13 deaths being referred to this order.

Diseases of the organs of generation, of locomotion, and of the integumentary system were fatal but to four, eight, and three lives respectively.

Class IV.—*Developmental Diseases.*

These are the diseases incidental to development, to growth, and to senile decay. The developmental diseases of childhood were fatal to 41 children; of these eight were born prematurely, six were malformed, and 27 died from the effects of teething.

The mothers who died in childbirth were five, including two from child bed fever (metria.) This is not unsatisfactory when it is remembered that during the same period 1221 children were born alive, in addition to many still-born.

The deaths attributed to senile decay are 62 in number. This should be the natural end of life, and the aim of all sanitary work is to decrease the number of deaths from all other causes.

It is pleasing to note that more than the average number of deaths are referred to senile decay in this borough.

The causes of deaths of 79 people are returned as atrophy and debility; these are cases of defective nutrition. Of the 79 deaths 57 are children under twelve months old.

CLASS V.—*Violent Deaths.*

Deaths to the number of 39 are included in this class. Of these 18 are due to accident or negligence, including four killed on the railway; four deaths the result of burns and scalds, and two children suffocated in bed by being overlain by their parents. Six deaths are the result of suicide. The deaths of 15 people have, after inquests, been entered in the registers as due to "natural causes, suddenly." On this point the Registrar General says, "To the question 'what is the cause of death?' Such verdicts as Natural Death or Visitation by God, it is scarcely necessary to say, are no answers at all, but mere evasions of the inquiry." Judged by this standard it would appear that fifteen times during the year have inquests been held and the juries dismissed on giving verdicts which that high authority calls "evasions of the inquiry." It is undoubtedly a pity that the causes of these fifteen deaths have not been more definitely ascertained, as, independently of other and more important reasons, precision is of the highest importance in statistics of mortality.

ON THE TOPOGRAPHY AND CAUSATION OF PHTHISIS (CONSUMPTION.)

In the summary of the causes of death I mentioned that the death rate from consumption was higher in Macclesfield than the average for England. I now propose to consider the cause of the excessive death rate from this disease.

In an inquiry of this kind our attention is naturally first of all directed to the effects of labour in the silk factories, which, as is well known, is the staple trade of the town. This is no difficult task, as but recently a report has been presented by Dr. Bridges and Mr. Timothy Holmes to the Local Government Board, on the health of the employees in textile factories. In making their inquiry these gentlemen submitted a series of questions to the medical practitioners residing in the chief factory towns, whose position brought them in contact with factory operatives. To the question, "Is factory labour generally deleterious or no?" 94 medical men out of 134 state that it is not. In answer to the question whether any processes are specially injurious to women or children, 99 replied in the negative, and only one referred to a process connected with silk—that of silk carding—as being deleterious. Again, only 31 medical practitioners consider the hours of labour too long, against 132 who are of the opposite opinion. But 51 out of 134 medical men state consumption is the disease most commonly found amongst factory operatives This however is what would be naturally expected when it is remembered that according to the Registrar General's annual reports more deaths are due to consumption than to any other disease. Neither must it be forgotten that these answers do not refer exclusively to employment in silk factories, but to all textile factories; and it is I believe almost universally admitted that labour in the cotton factories is a fruitful source of consumption, on account of the high temperature which has to be maintained, and the dust generated, which being inhaled cannot but have an injurious effect on the lung tissue. It is probable that had these questions been confined strictly to the influence of the silk manufacture on the health the answers would have been much more decisive, and much more in favour of the healthfulness of the silk trade. Dr Bridges and Mr. Holmes after a personal inquiry into the health of the silk operatives speak thus:—"The silk manufacture seemed to us a very healthy one, the only process in which any dust is generated being the 'dressing of waste silk,' which however is by no means so bad as the carding of cotton, or tow or flax heckling; and the manual labour is certainly not severe in any part nor is there any unnatural temperature." My own observations and the inquiries I have felt it my duty as your Officer of Health to make—the details of which I will not trouble you with—confirm this favourable opinion. I believe that with the single exception of silk waste dressing, in which however but few people are employed, there is no process in the manufacture of silk calculated to injuriously affect the health.

The number of silk waste dressers and cotton operatives in this town being so comparatively small we must look for other causes than these for this unusual mortality from consumption among us.

In doing so reference must be made to those important investigations into the etiology of consumption by Dr. Buchanan, the results of which form two reports; the one entitled "The results gained by works designed to promote the Public Health," and the other on "The Distribution of Phthisis as affected by Dampness of Soil," which are printed as appendices to the 9th and 10th reports of the Medical Officer of the Privy Council. In the first of these investigations Dr. Buchanan found quite unexpectedly, that in certain towns, including Macclesfield, the mortality from consumption had decreased in proportion to the drying of the subsoil by means of drainage. In this town the diminution in the death rate from consumption was very marked. In the eight years (1845-52) the mortality from this disease averaged an annual rate of 5·15 per 1000 of the living; in the four years (1853-6) during which 43 streets and 245 courts were newly sewered, paved, and flagged, upwards of 1600 houses being thus improved, the deaths from consumption were at the rate of 3·9 per 1000 ; and in the eight years after the construction of these sanitary works the consumption death rate was 3·56 per 1000. In other towns where more drainage has been done there was a still greater reduction in the deaths from consumption; but in some few towns where there had been no drying of the subsoil effected, owing either to defective drains or to the ground being already dry, as at Penzance, there was no diminution on the amount of this disease.

Therefore the relation between dampness of soil and consumption as one of cause and effect was more than probable, and Dr. Buchanan in his second report converted this probability into a scientific certainty.

Attached to this report is a map of Macclesfield* on which are marked all the fatal cases of consumption which have occured during the past year. It will be noticed that although there are isolated cases in all parts of the borough, there are some districts where the deaths from this disease are much more numerous than others. Take for example Garden-street and Steeple-street, Hurdsfield; in these two streets the death rate from consumption is 12·4 per 1000. Compare this with the streets in Newtown. In the block of houses bounded on the north by Shaw-street, on the south by Barton-street, on the west by Bond-street, and on the south by Bridge-street and Brown-street, and comprising Newton-street, Higginbotham-street, Hatton-street, and a portion of Paradise-street and Crossall-street, the death rate from consumption is only 2·55 per 1000 or below the average for England. Now we know that the houses in Garden-street and Steeple-street are similar in character to those in Newtown, that the mode of ventilation is the same, and that the people are living under the same climatic influences. It is therefore very difficult to say why twelve out of every thousand should die from consumption in these streets in Hurdsfield, and only two in the Newtown streets, unless it is that the Newtown streets are for the most part well drained, and Garden-street and Steeple-street are not. Some little allowance must however be made for the larger number of cotton operatives who live in Hurdsfield. The same absence of proper drainage seems to me to be the chief cause of the high mortality from consumption in that group of streets in Sutton consisting of North-street, West-street, Albion-street, Byron-street, Duke-street, Pitt-street, Half-street, and a portion of High-street, where the death rate from this disease is 6·66 per thousand.

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* Deposited for inspection in the office of the Medical Officer of Health at the Town Hall.

In the Watercotes and the district lying between the river Bollin and the Railway from Windmill-street to Brook-street, chiefly inhabited by Irish, the death rate from consumption is 9·84 per 1000. It will be remembered that the Watercotes and some of the adjacent courts were sewered some years ago; but as the houses are built on a thin layer of gravel overlying a thick bed of clay, and are but a few feet higher than the river, into which the sewer empties itself, it was not possible to place the drains low enough to carry off all the subsoil water, and consequently there is still some dampness of the soil. This and the undrained state of some of the courts may partly account for the heavy consumption mortality in this district, but there are I think other reasons for this disease being so prevalent in the Watercotes, viz.:—overcrowding and defective ventilation.

There can be no doubt that defective ventilation and the consequent breathing of foul air is a most fruitful source of consumption. Unfortunately a very great number of houses in this borough are either ventilated imperfectly or not at all. Numerous houses have neither back doors nor back windows, and therefore have no through draught; whilst what windows they have are made with iron frames which open neither at the top nor bottom. Then to make matters worse, people very foolishly endeavour to make their already ill-ventilated bedrooms "nice and warm" by blocking the chimnies and stopping the cracks under the doors and in the windows, and so effectually shutting out the fresh air. In a small cottage bedroom, thus treated, two or three or perhaps four, or five, or six people will sleep; there is not enough air in the room to last the whole night, and therefore they are obliged to breath the same over and over again, until by morning it is so laden with carbonic acid as to be quite unfit for the lungs to take in; and those who have slept in the room instead of being refreshed and invigorated as they ought to be, complain of headaches, and say they feel as tired as when they went to bed. The evil effects of living or sleeping in rooms such as I have described must be apparent to every thinking mind. That such a state of things is calculated to cause consumption there is abundant proof. For instance, among the Alps the Swiss women suffer severely from consumption, and the men are almost exempt from it, because they live an open air life, while the women who are employed in making embroidery congregate all day long in small ill-ventilated rooms. It is well known that cows when confined in close stables become consumptive. Or to refer to what have been called our Darwinian ancestors,—it was found at the Zoological Gardens that the monkeys in the old monkey house which was built on the principle of keeping them "nice and warm," and was badly ventilated, died rapidly from consumption, but on the erection of a new monkey house, which was properly ventilated, the disease disappeared.

It may be noticed that hitherto I have said nothing about hereditary predisposition; I have not done so because I do not think it ought to be looked upon as a cause of consumption. A person may be predisposed to this disease, but there must also be an exciting cause. For example, take two brothers, sons of consumptive parents, the one lives in an undrained court and sleeps in an ill-ventilated apartment, and the other lives under perfect hygienic conditions; is it not more than probable that the former will suffer from the same disease as his parents, whilst the latter may escape? Hereditary predisposition simply means this:—that of two persons living the same mode of life and under the same hygienic conditions, the one who is born of consumptive parents is more likely to become consumptive than the one of healthy parents. It must not be thought that it is impossible to become consumptive without being hereditarily predisposed. Indeed it seems to be most often acquired, for out of 1,000 cases admitted into the Brompton Consumption Hospital, in only 367 was there any hereditary predisposition.

The mode of acquiring consumption and the causes of its prevalence in certain parts of this borough, I have endeavoured to point out in this report, and I would thus summarise my observations.

1st.—That although there can be but little doubt that employment in cotton factories and in silk-waste dressing is a cause of consumption, yet there being but a small portion of the working classes in this town thus employed, the excess of deaths from consumption cannot be wholly accounted for in this way.

2nd.—That there is no evidence to prove that labour in silk factories (silk-waste dressing excepted) is a cause of consumption.

3rd.—That there being a great preponderance of fatal cases of consumption in undrained streets as compared with streets properly sewered, there is reason to believe the defective sanitary state of the streets is one of the causes of the excess in the mortality from this disease.

4th.—That the wide spread absence of ventilation in the living and bedrooms of the cottage houses is likewise a cause of numerous deaths from consumption.

ON INFANTILE MORTALITY.

During the year, 230 infants under one year of age died in this borough, being at the rate of 18·7 per cent. of the births registered, or 24·0 per cent. of the total deaths. Of these 230 deaths, 60 died from convulsions; 57 from atrophy or wasting away; 28 from diseases of the lungs; 27 from the effects of teething; 24 from diarrhœa; 13 were children either malformed or prematurely born; 5 died from tubercular disease; 4 from syphilis; and the remainder from minor complaints. As I pointed out in the chapter on district mortality, these deaths were very unevenly distributed throughout the town. I now propose to consider the cause of the mortality among children, and the reasons of the infantile death rate being higher in some districts than others.

The first thing to which our attention is directed is the employment of mothers in factory labour. I am very unwilling to appear to underestimate the evils which accrue to the infant from being imperfectly suckled, and to the child while yet unborn from the over exertions of its mother; yet I cannot but think that the advocates of the non-employment of married women in factories have, in their zeal to compel wives and mothers to stay at home attending to their domestic duties, overlooked some of the results which would follow the banishment of married females from factories. Is it not probable that the earnings of the family being so materially diminished they would be compelled to live in a smaller, and therefore overcrowded house, and the children not being provided with such good food would grow up weak and stunted? Or may not the mother forced to do something for the support of her young family and perchance of an invalid husband, have to engage in more arduous toil than factory labour, working longer hours for less pay, and even then not be able to suckle her babe? Is it not also questionable whether the young men among the working classes, finding that when a woman marries she has to cease going to the factory, could, in all cases, afford to marry; and would not thus tend to increase the already large number of illegitimate children? What is really wanted in factory labour, is not the total exclusion of married women, but means to prevent the employment of females advanced in pregnancy, and for (say) one month after their confinements.

The subject is however surrounded with difficulty. My own opinion is that we must expect more from sanitary education and pointing out to the mothers the evils they bring on themselves and their offspring, by working at such times than from legislative enactments. In Mr. Mundella's Factory Bill I notice that it is provided that females shall work one hour per day less than they do at the present time. Should the bill become law it will cause no improvement, I think, in the rate of infantile mortality, as children will be as imperfectly suckled, be put out to nurse, and be as improperly fed then as now.

There seems to me to be a tendency to attribute the whole of the infantile deaths to this one cause :—the employment of women in factories. Now, it is a fact worth noticing that certain towns,—Liverpool for instance—where women are not employed in factory labour have higher rates of infantile mortality than any of the factory towns referred to in the report of Dr. Bridges and Mr. T. Holmes; and in the statistics of mortality which I have from time to time laid before you I have shown that a greater proportionate number of children die in some of the non-factory districts of the Macclesfield Union than in the factory districts. It is evident that there must therefore be other causes than female labour for the mortality among children.

Perhaps the most important of these is improper feeding. It is lamentable to think to what a vast extent this prevails; it is not confined solely to the working population, but permeates through all classes of society. Among the married, it is nearly universal to give the child artificial food as well as that which nature has provided. Illegitimate children are more often brought up entirely by hand, but in both cases the food is generally highly improper both in quality and quantity. It is no unusual thing for even the youngest infants to be fed with bread sopped in milk and water in a cup, which is left for hours on the hob to keep warm and becomes sour; or with sago or arrowroot or corn flour gruel, out of a bottle which, among the more neglectful, is but seldom cleaned, and is often encrusted with curdled milk. Of course children cannot thrive on such food as this, and therefore, they either suffer from diarrhœa, or gradually droop and waste away, or are suddenly seized with a convulsion fit and die.

Another cause of infantile mortality is the practice of giving children narcotics, such as Godfrey's cordial, paregoric, syrup of poppies, and tincture of opium. This is more particularly observed among those children who are put out to nurse whilst their mothers are working, the person in charge, usually an old woman, finding it an easy way of stifling the young one's cry.

The practice among the poor of allowing their infants to live to a large extent in the day time in the streets, imperfectly clad, under the care of elder sisters, who often are little more than infants themselves, is also a source of infantile deaths; to this may be attributed many of the deaths from pulmonary diseases.

Drunkenness may also be considered one of the causes of infantile mortality, as the offspring of drunken parents frequently die from convulsions; and it is no unusual thing for a child to be over lain and suffocated by its parent who is in a state of drunken stupor. Immorality, the handmaid of intemperance, is also accountable for some deaths,—diseases being transmitted from parent to child.

Some deaths may be attributed to the dirty state of the courts, to the proximity of the privies to the houses, and to the emanations from the uncovered and therefore damp ash pits.

The absence of proper ventilation is a no less evil, and is one which affects the old as well as the young.

The sanitary condition of the dwellings of the poor is a most important cause of infantile mortality. The Medical Officer of the Privy Council has frequently pointed out this; and in my summary of district mortality, I have mentioned that the infantile death rate is highest in the unsewered parts of the town. Dr. Buchanan when he visited Macclesfield for the purpose of inquiring into the effects of the drainage works on the health of the people, found that in the eight years 1845-52, before the commencement of the drainage operations, the infantile death rate was 7·75 per 1,000 of the population; during the four years 1853-6, when the sanitary works were being executed, the rate was 7·0 per thousand; and for the eight years 1857-64, after their completion, the infantile death rate was as low as 5·9 per 1,000, showing a decrease at 23 per cent.

Such are the principal causes of the death rate among children; I now wish briefly to consider their remedies.

1st.—As it has been shown that the excessive death rate from consumption and the mortality among children depend on the undrained state of certain localities, we see the necessity of increased exertions in sewering these streets. "An undrained district," says Mr. Simon, the Medical Officer of the Privy Council, "is legally a nuisance, and sanitary authorities are therefore bound to provide that such a state shall not continue through want of proper constructions for the drainage."

2nd.—The courts and back streets should be periodically visited by the scavengers and cleansed. To me it seems of greater importance to attend to the cleanliness of the back slums than of the principal streets. The poor cannot be expected to keep their houses clean if the courts in which they are situate are dirty.

3rd.—The night soil should be periodically removed (from the crowded courts most frequently); all ash pits covered in, and all nuisances promptly attended to.

4th.—The houses of the poor should be systematically inspected, so that overcrowding may be prevented, and defective ventilation improved.

There is another mode in which the lives of many children can be saved, which lies outside the province of the Sanitary Authority, and must be left to the generosity of the employers of female labour. I refer to the establishment of Day Nurseries, where children, on the payment of a small fee, can be taken care of, properly fed, and properly attended whilst their mothers are at work. I am convinced that such an institution in this town would prove to be an inestimable boon to the working classes.

I have the honour to be,

Mr. Chairman and Gentlemen,

Your obedient Servant,

GEORGE BLAND,

Medical Officer of Health.

To the Local Board of Health,
Macclesfield.

TABLE 2.

Showing the Birth Rate, Death Rate, and the Rate of the deaths from the seven principal Zymotic Diseases per thousand of the living, for each quarter of the year, 1873, in the Borough of Macclesfield, compared with some other Towns and Districts.

DISTRICTS AND TOWNS.	FIRST QUARTER.			SECOND QUARTER.			THIRD QUARTER.			FOURTH QUARTER.		
	Birth Rate.	Death Rate.	Rate of 7 principal Zymotic Diseases.	Birth Rate.	Death Rate.	Rate of 7 principal Zymotic Diseases.	Birth Rate.	Death Rate.	Rate of 7 principal Zymotic Diseases.	Birth Rate.	Birth Rate.	Rate of 7 principal Zymotic Diseases.
The United Kingdom	37·4	23·3	...	35·6	20·7	...	34·5	19·5	...	34·8	21·7	...
England and Wales	37·6	23·0	...	35·5	20·4	...	34·6	19·4	...	34·9	21·8	...
The Urban Districts of England ...	...	24·4	...	...	21·6	...	...	22·0	...	...	24·7	...
The Rural do. do. ...	...	21·1	...	...	18·8	...	...	16·0	...	...	17·9	...
The Average of the 18 largest English Towns ...	39·5	24·8	2·6	36·6	22·0	2·6	35·8	23·9	6·6	36·3	25·5	4·0
The Average of 50 other large English Towns ...	38·8	24·7	2·7	36·6	21·7	2·3	35·8	21·0	4·5	35·5	23·7	4·3
London	38·4	22·7	1·9	33·9	20·0	2·2	34·3	21·8	5·7	35·4	25·3	3·6
Manchester	42·6	34·1	5·5	39·9	29·0	4·7	37·2	29·9	9.3	36·6	27·7	4·3
Stockport	36·7	24·9	3·0	39·6	24·2	1·8	37·7	27·8	6·9	34·1	26.2	2·6
Chester	34·8	25·1	2·5	27·2	20·3	1·5	27·6	16·4	1·8	30·4	17.5	1·0
Macclesfield	**38·2**	**23·1**	**2·1**	**33·6**	**27·7**	**1·7**	**29·5**	**24·0**	**2·1**	**32·4**	**22·1**	**1·2**

TABLE 3.

Showing the percentage of infantile deaths to births registered, and the percentage of deaths of children under twelve months old, of people aged 60 years and upwards, and of deaths from the seven principal Zymotic diseases, to the total deaths during each quarter of the year, 1873, in Macclesfield, and some other towns and districts.

TOWNS AND DISTRICTS.	FIRST QUARTER.				SECOND QUARTER.				THIRD QUARTER.				FOURTH QUARTER.			
	Percentage of ~~Births~~ Deaths under 1 year to Births registered.	Percentages to Total Deaths.			Percentage of Deaths under 1 year to Births registered.	Percentages to Total Deaths.			Percentage of Deaths under 1 year to Births registered.	Percentages to Total Deaths.			Percentage of Deaths under 1 year to Births registered.	Percentages to Total Deaths.		
		Children under 1 year of age.	People over 60 years of age.	From 7 principal Zymotc Diseases.		Children under 1 year.	People over 60 years.	From 7 principal Zymotic Diseases.		Children under 1 year.	People aged 60 years and upwards.	From 7 principal Zymotic Diseases.		Children under 1 year.	People aged 60 years and upwards.	From 7 principal Zymotic-Diseases.
All England	14·3	23·3	28·9	12·6	13·2	23·0	26·2	10·3	17·3	30·8	21·4	11·5	14·8	23·7	25·2	14·6
Cheshire	13·9	23·4	28·9	10·5	13·7	22·7	27·1	8·4	16·2	29·4	23·6	17·0	14·6	24·7	24·6	11·0
Average of the 18 largest towns	14·2	22·9	24·6	10·5	14·4	24·0	20·9	11·7	24·3	37·0	15·1	27·5	16·7	24·2	20·7	15·7
London	12·4	21·0	27·3	8·3	12·9	21·9	22·2	11·0	22·5	35·4	15·6	25·9	16·1	22·7	22·2	14·3
Manchester	17·6	22·0	17·3	16·0	15·8	21·7	16·6	16·4	29·7	36·9	13·2	31·2	16·9	22·4	16·6	15·4
Stockport	14·0	23·8	26·6	8·9	12·7	20·1	25·0	7·2	30·8	40·8	12·9	24·2	25·5	26·1	23·9	9·4
Chester	16·0	18·4	27·5	9·3	14·9	18·9	32·1	6·1	13·3	22·0	25·8	10·5	11·9	20·0	30·6	5·4
Macclesfield Union	15·2	22·0	28·9	12·0	18·2	23·3	31·6	4·2	16·2	22·6	28·8	10.1	14 9	21·5	32·0	5·6
Macclesfield (Boro')	**17·1**	**26·3**	**32·5**	**8·9**	**21·4**	**24·6**	**29·1**	**5·2**	**21·9**	**25·7**	**29·2**	**8·7**	**15·5**	**21·8**	**31·2**	**5·2**

TABLE 4.

Showing the age of each person dying in the Borough of Macclesfield, during each month of the year, 1873.

BOTH SEXES.

MONTHS.	All Ages.	Under Twelve Months.	1.	2.	3.	4.	Total under 5 Years.	5 to 10.	10 to 15	15 to 20.	20 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 to 75.	75 to 85.	85 to 95.	95 and upwards	Total over 60 Years.
January	73	22	5	1	2	1	31	3	1	1	3	9	3	4	5	9	2	2	...	15
February ...	87	22	5	3	...	1	31	1	...	2	3	4	6	10	11	10	8	1	...	27
March	82	15	4	5	...	1	25	...	2	1	1	6	6	3	15	17	5	1	...	33
April	91	22	1	2	...	...	25	...	1	3	4	2	10	10	13	15	8	...	...	32
May	87	23	4	1	..	...	28	2	...	2	1	12	10	8	9	7	5	3	...	20
June	93	21	3	1	1	...	26	...	2	4	2	6	8	10	9	18	6	2	...	29
July	87	16	7	1	1	...	25	...	2	1	1	8	7	6	15	13	8	1	...	28
August	65	21	2	2	...	...	25	...	...	4	3	1	4	7	7	7	6	1	...	19
September ...	79	22	1	3	1	3	30	1	2	3	2	3	4	11	8	12	2	1	...	20
October ...	70	19	4	3	1	...	27	1	2	...	2	6	7	3	3	10	8	1	...	21
November ...	67	13	3	1	...	...	17	1	2	1	...	4	9	5	12	11	4	1	...	25
December ...	75	14	5	...	1	...	20	2	1	5	1	6	7	8	9	9	7	...	...	20
Total	956	230	44	23	7	6	310	11	15	27	23	67	81	85	116	138	69	14	0	289

TABLE 5.

Showing the age of each Male dying in the Borough of Macclesfield, during each month of the year, 1873.

MALES.

MONTHS.	All Ages.	Under 12 Months.	1	2.	3.	4.	Total under 5 Years.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 to 75.	75 to 85.	85 to 95.	95 and up-wards.	Total over 60 Years.
January	35	12	2	...	1	...	15	1	...	1	5	5	2	2	1	5	1	...	...	7
February	50	17	1	3	...	1	22	...	...	1	2	2	1	5	6	8	4	1	...	18
March	35	10	1	2	...	1	14	...	...	...	2	2	3	2	5	6	2	...	...	11
April	44	14	...	1	...	...	15	...	...	1	2	2	1	6	4	8	5	...	...	15
May	50	16	2	...	...	...	18	2	...	2	6	6	8	2	4	5	3	...	...	11
June	51	10	2	1	1	...	14	...	2	1	3	3	4	5	4	10	4	2	...	18
July	50	10	4	1	1	...	16	...	2	..	5	5	4	4	7	7	4	1	...	16
August	33	10	2	...	...	...	12	...	...	2	...	...	3	4	4	3	3	...	...	9
September	40	12	1	1	...	3	17	1	...	1	1	1	1	5	4	7	2	...	...	13
October	33	8	3	2	...	...	13	...	1	2	2	2	2	1	1	7	3	1	...	12
November	36	9	2	1	...	...	12	1	2	...	2	2	3	4	6	3	3	...	...	11
December	36	10	2	...	1	...	13	2	...	1	4	4	2	3	4	3	2	...	...	9
Total	493	138	22	12	4	5	181	7	7	11	13	34	34	43	50	72	36	5	0	150

TABLE 6.

Showing the age of each Female dying in the Borough of Macclesfield, during each month of the year.

FEMALES.

MONTHS.	All Ages.	Under 12 Months.	1.	2.	3.	4.	Total under 5 Years.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 35.	35 to 45.	44 to 55.	55 to 65.	65 to 75.	75 to 85.	85 to 95.	95 and upwards.	Total over 60 Years.
January	38	10	3	1	1	1	16	2	1	...	1	4	1	2	4	4	1	2	...	8
February	37	5	4	...	...	...	9	1	...	1	3	2	5	5	5	2	4	...	...	9
March	47	5	3	3	...	...	11	...	2	1	...	4	3	1	10	11	3	1	...	12
April	47	8	1	1	...	...	10	...	1	2	2	...	9	4	9	7	3	...	...	17
May	37	7	2	1	...	...	10	...	...	...	1	6	2	6	5	2	2	3	...	9
June	42	11	1	...	...	...	12	...	...	3	...	3	4	5	5	8	2	...	...	11
July	37	6	3	...	...	...	9	...	...	1	1	3	3	2	8	6	4	...	...	12
August	32	11	...	2	...	...	13	...	...	2	1	1	1	3	3	4	3	1	...	10
September	39	10	...	2	1	...	13	...	2	2	1	2	3	6	4	5	...	1	...	7
October...	37	11	1	1	1	...	14	1	1	...	...	4	5	2	2	3	5	...	...	9
November	31	4	1	...	...	...	5	...	...	1	...	2	6	1	6	8	1	1	...	14
December	39	4	3	...	...	...	7	...	1	3	...	2	5	5	5	6	5	..	...	11
Total	463	92	~~92~~ 22	~~22~~ 11	3	1	129	~~8~~ 4	8	16	10	33	47	42	66	66	33	9	0	139

APPENDIX I.

HOW TO REAR HEALTHY CHILDREN.

FOR A BABY.

UNDER SEVEN MONTHS.

1. *The best food is its mother's milk*; or of *fresh cow's milk* two parts, and one part warm water, with a little sugar to sweeten it, or cream to make it better; and *nothing else*, unless ordered by the doctor.

2. *On no account* give as food, "*boiled bread*," "*baked flour*," "*arrowroot*," &c,, or *a little of what the parents have*, till there are teeth to eat with.

3. Give the breast or bottle regularly, and not oftener than once every three hours, except to a weakly or a new-born baby; let the child have a full meal, and then it will sleep.

Endeavour to feed the child early in the morning and late at night, but not during the night.

4. Sponge the child in warm water all over twice a day, dry it well and tenderly.

5. Let it breathe as pure air as possible, and be warmly but not tightly clothed.

AT SEVEN MONTHS.

Or when the first 2 teeth are cut.—A boiled crust, baked flour, or farinaceous food with milk added, may be given twice daily; feed regularly every three or four hours, and give milk instead of milk and water.

AT TEN MONTHS.

An egg, or flour pudding with egg, bread crumbs and gravy, broth, or rice, for dinner, may be given sparingly; for breakfast and supper bread and milk, or bread and butter with milk.

AT EIGHTEEN MONTHS.

Or when it has cut 4 double teeth.—A little underdone meat, with potatoes mashed fine, and plenty of pudding, milk, and bread and butter; *but care must be taken that the food be not lumpy*, and that it be always well chewed by the gums and teeth, and *be eaten slowly*.

1. *Children that have no teeeth* cannot thrive on the bits of solid food that the parents must chew to eat.

2. *Children that have got their mouth full of teeth*, require a more solid food than breast milk.

3. If a child of one year old have but *two teeth*, it is a sign of weakness, perhaps from improper food, and medical advice should be taken.

4. Except by medical advice, no child should be weaned before *eight months* old, or be suckled for a longer period than *one year*.

The above is sold for distribution by the Ladies Sanitary Association, 22, Berners-street, Oxford-street, W., in packets of Fifty copies, 1s. each packet.

The Ladies' Sanitary Association also publishes an excellent series of simple interesting tracts on Sanitary and Domestic subjects, which I commend to the notice of tract distributors, district visitors, and all interested in the health and social well being of the people.

APPENDIX II.

RETURN OF NIGHTSOIL AND RUBBISH,

Taken from the streets during the following periods.

No. of Loads each Month.	1870 and 1871.	1871 and 1872.	1872 and 1873.	1873 and 1874.
October	69	240	466	571
November	243	451	472	689
December	201	395	694	701
January	No record	512	1094	800
February	336	616	559	1697
March	342	506	460	1163
April	446	465	386	823
May	314	335	590	,,
June	220	287	588	,,
July	63	8	731	,,
August	65	241	843	,,
September	378	404	721	,,
Totals	2677 11 months only.	4460	7574	6444 7 months only

SWINNERTON AND BROWN, PRINTERS, MACCLESFIELD.

TABLE 7.—CAUSES OF DEATH AT DIFFERENT PERIODS OF LIFE IN THE BOROUGH OF MACCLESFIELD 1873

CLASS.	CAUSES OF DEATH.	ALL AGES.	UNDER 1 YEAR.	1	2	3	4	TOTAL UNDER 5 YEARS	5—	10—	15—	20—	25—	35—	45—	55—	65—	75—	85—	95 and upwards	CAUSES OF DEATH.	CLASS.
	ALL CAUSES	956	230	44	23	7	6	310	11	15	27	23	67	81	85	116	138	69	14	...	ALL CAUSES	
	SPECIFIED CAUSES	938	227	43	23	7	6	306	11	15	27	23	64	78	80	114	137	69	14	...	SPECIFIED CAUSES	
	(CLASSES.)																				(CLASSES.)	
I.	ZYMOTIC DISEASES	90	38	7	5	4	2	56	4	4	1	1	7	2	3	3	6	1	2	...	ZYMOTIC DISEASES	I.
II.	CONSTITUTIONAL ,,	169	5	3	5	1	1	15	3	4	18	21	30	30	22	17	9	...	...	..	CONSTITUTIONAL ,,	II.
III.	LOCAL ,,	470	98	11	9	2	2	122	4	6	7	1	23	40	48	84	99	33	3	...	LOCAL ,,	III.
IV.	DEVELOPMENTAL ,,	185	84	20	4	...	...	108	...	...	...	...	1	4	...	8	21	34	9	...	DEVELOPMENTAL ,,	IV.
V.	VIOLENT DEATHS	24	2	2	...	...	1	5	...	1	1	...	3	2	7	2	2	1	...	...	VIOLENT DEATHS	V.
	(ORDERS.)																				(ORDERS.)	
I.	1. MIASMATIC DISEASES	79	32	7	5	4	2	50	4	4	1	1	5	2	1	3	5	1	2	...	1. MIASMATIC DISEASES	I.
	2. ENTHETIC ,,	7	4	...	...	...	...	4	...	...	...	...	2	...	...	...	1	...	...	...	2. ENTHETIC ,,	
	3. DIETIC ,,	3	1	...	...	...	...	1	...	...	...	...	...	...	2	...	...	...	...	...	3. DIETIC ,,	
	4. PARASITIC ,,	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	4. PARASITIC ,,	
II.	1. DIATHETIC ,,	31	...	...	...	...	...	...	1	...	1	...	4	6	6	8	5	...	...	...	1. DIATHETIC ,,	II.
	2. TUBERCULAR ,,	138	5	3	5	1	1	15	2	4	17	21	26	24	16	9	4	...	...	...	2. TUBERCULAR ,,	
III.	1. DISEASES OF NERVOUS SYSTEM	185	64	6	6	2	2	80	1	1	1	1	10	17	12	16	34	11	1	...	1. DISEASES OF NERVOUS SYSTEM	III.
	2. ,, ORGANS OF CIRCULATION	79	...	...	...	...	..	...	...	2	4	...	2	9	8	32	16	6	...	...	2. ,, ORGANS OF CIRCULATION	
	3. ,, RESPIRATORY ORGANS	149	28	5	3	...	...	36	2	1	2	...	4	8	13	26	41	14	2	...	3. ,, RESPIRATORY ORGANS	
	4. ,, DIGESTIVE ORGANS	29	4	...	...	...	...	4	...	1	...	...	7	3	4	5	5	...	...	...	4. ,, DIGESTIVE ORGANS	
	5. ,, URINARY ORGANS	13	...	...	...	...	...	...	..	1	...	...	...	3	4	2	1	2	...	...	5. ,, URINARY ORGANS	
	6. ,, ORGANS OF GENERATION	4	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	6. ,, ORGANS OF GENERATION	
	7. ,, ORGANS OF LOCOMOTION	8	1	...	...	...	...	1	1	...	...	...	...	...	3	1	2	...	...	...	7. ,, ORGANS OF LOCOMOTION	
	8. ,, INTEGUMENTARY SYSTEM	3	1	...	...	...	...	1	...	...	...	...	...	...	...	2	...	...	...	...	8. ,, INTEGUMENTARY SYSTEM	
IV.	1. DEVELOPMENTAL DISEASES OF CHILDREN	41	27	11	3	...	...	41	...	...	...	...	...	...	...	...	...	...	...	...	1. DEVELOPMENTAL DISEASES OF CHILDREN	IV.
	2. ,, ,, ADULTS	3	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	2. ,, ,, ADULTS	
	3. ,, ,, OLD PEOPLE	62	...	...	...	...	...	...	..	...	...	...	...	...	...	2	17	34	9	...	3. ,, ,, OLD PEOPLE	
	4. DISEASES OF NUTRITION	79	57	9	1	...	...	67	...	...	...	...	...	2	...	6	4	...	...	...	4. DISEASES OF NUTRITION	
V.	1. ACCIDENT OR NEGLIGENCE	18	2	2	...	...	1	5	...	1	1	...	2	...	5	2	1	1	...	...	1. ACCIDENT OR NEGILENCE	V.
	*																				*	
	3. HOMICIDE	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3. HOMICIDE	
	4. SUICIDE	6	...	...	...	...	...	...	...	...	...	...	1	2	2	...	1	...	...	...	4. SUICIDE	
	SUDDEN DEATHS, CAUSE UNASCERTAINED	15	3	1	...	...	...	4	...	...	...	...	2	2	4	2	1	...	...	...	SUDDEN DEATHS, CAUSE UNASCERTAINED	
	CAUSES NOT SPECIFIED, OR ILL DEFINED	3	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...	CAUSES NOT SPECIFIED, OR ILL DEFINED	
I.	ORDER 1.																				ORDER 1.	I.
	Smallpox	0	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Smallpox	
	Measles	3	2	1	...	...	..	3	...	...	...	..	...	...	...	...	...	...	...	...	Measles	
	Scarlet Fever	5	1	2	...	...	1	4	...	1	...	...	...	...	..	...	...	...	...	...	Scarlet Fever	
	Diphtheria	1	...	...	1	..	...	1	...	...	..	...	...	...	...	...	...	...	...	...	Diphtheria	
	Croup	2	...	1	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	Croup	
	Whooping Cough	6	1	1	...	3	...	5	1	...	...	...	...	...	...	...	...	...	...	...	Whooping Cough	
	Fever { Typhus	3	...	...	...	1	...	1	...	...	...	...	1	...	..	1	...	...	...	...	Fever { Typhus	
	Fever { Typhoid or Enteric	8	...	...	1	.	1	2	...	1	1	1	2	...	1	...	...	...	...	...	Fever { Typhoid or Enteric	
	Fever { Continued	4	...	...	1	..	..	1	1	...	...	...	...	1	...	...	1	...	...	...	Fever { Continued	
	Erysipelas	5	3	...	...	..	...	3	...	...	...	...	...	...	...	1	1	...	...	...	Erysipelas	
	Puerperal Fever (Metria)	2	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	Puerperal Fever (Metria)	
	Carbuncle	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	Carbuncle	
	Influenza	2	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	Influenza	
	Dysentery	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Dysentery	
	Diarrhœa	34	24	2	2	...	...	28	1	1	...	...	...	...	...	...	2	...	2	...	Diarrhœa	
	Cholera	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Cholera	
	Rheumatism	3	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	...	...	Rheumatism	
	ORDER 2.																				ORDER 2.	
	Syphilis	4	4	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	Syphilis	
	Stricture of Urethra	3	...	...	...	...	...	...	...	...	...	...	2	...	...	...	1	...	...	...	Stricture of Urethra	
	ORDER 3.																				ORDER 3.	
	Purpura and Scurvy	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	Purpura and Scurvy	
	Alcoholism	2	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	Alcoholism	
	ORDER 4.																				ORDER 4.	
	Thrush	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	Thrush	
II.	ORDER 1.																				ORDER 1.	II.
	Gout	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Gout	
	Dropsy	11	...	...	...	...	...	...	...	...	...	...	1	1	5	3	1	...	...	...	Dropsy	
	Cancer	17	...	...	...	...	...	...	1	..	1	...	2	5	1	5	2	...	...	...	Cancer	
	Mortification	3	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	...	...	Mortification	
	ORDER 2.																				ORDER 2.	
	Scrofula	24	...	...	2	...	1	3	1	...	3	4	...	4	3	3	3	...	...	...	Scrofula	
	Tabes Mesenterica	8	4	2	2	..	...	8	...	...	...	...	...	...	...	...	...	...	...	...	Tabes Mesenterica	
	Phthisis	102	...	...	...	...	...	..	1	4	14	17	26	20	13	6	1	...	...	...	Phthisis	
	Hydrocephalus	4	1	1	1	1	...	4	...	...	...	...	...	...	...	...	...	...	...	...	Hydrocephalus	
III.	ORDER 1.																				ORDER 1.	III.
	Cephalitis	2	1	...	...	1	...	2	...	...	...	...	..	...	...	...	...	...	...	...	Cephalitis	
	Apoplexy	25	...	...	...	...	...	...	...	...	...	...	1	1	1	7	12	3	...	...	Apoplexy	
	Paralysis	38	...	...	...	...	...	...	...	...	...	...	2	9	3	3	12	8	1	...	Paralysis	
	Insanity	3	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	Insanity	
	Epilepsy	17	...	...	...	...	1	1	1	1	1	1	5	2	2	1	2	...	...	...	Epilepsy	
	Convulsions	69	60	4	3	1	...	68	...	...	...	...	...	...	1	...	...	...	...	...	Convulsions	
	Brain Disease, &c.	31	3	2	3	...	1	9	...	...	...	...	2	4	3	5	8	...	...	...	*Brain Disease, &c.*	
	ORDER 2.																				ORDER 2.	
	Pericarditis	3	...	...	...	...	...	...	...	...	2	...	...	...	...	...	1	...	...	...	Pericarditis	
	Aneurism	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	Aneurism	
	Heart Disease, &c.	75	...	...	...	...	...	...	...	2	2	...	2	9	7	32	15	6	...	...	*Heart Disease, &c.*	
	ORDER 3.																				ORDER 3.	
	Bronchitis	99	16	3	1	...	...	20	2	...	...	...	2	4	9	16	33	11	2	...	Bronchitis	
	Pleurisy	1	...	...	...	...	...	...	...	...	...	..	...	...	1	...	...	...	...	...	Pleurisy	
	Pneumonia	33	12	2	2	...	...	16	...	1	2	...	2	1	2	4	4	1	...	...	Pneumonia	
	Asthma	14	..	...	...	...	...	...	...	...	...	...	...	3	1	4	4	2	...	...	Asthma	
	Lung Diseases &c.	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	*Lung Diseases, &c.*	
	ORDER 4.																				ORDER 4.	
	Gastritis	4	1	...	...	...	...	1	...	...	...	...	...	...	1	1	1	...	...	...	Gastritis	
	Enteritis	2	...	...	...	...	...	...	...	...	..	...	2	...	...	...	...	...	...	...	Enteritis	
	Peritonitis	3	...	...	...	.	...	...	...	1	...	...	1	...	...	1	...	...	...	...	Peritonitis	
	Ulceration of Intestines	1	...	...	...	...	...	...	...	...	...	...	...	..	...	1	...	...	...	...	Ulceration of Intestines	
	Stomach Disease, &c.	3	1	...	...	...	...	1	...	...	...	...	...	...	...	1	1	...	...	...	*Stomach Disease &c.*	
	Hepatitis	4	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2	...	...	...	Hepatitis	
	Jaundice	2	2	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	Jaundice	
	Liver Disease, &c.	10	...	...	...	...	...	...	...	...	...	...	2	3	3	1	1	...	...	...	*Liver Disease, etc.*	
	ORDER 5.																				ORDER 5.	
	Bright's Disease (Nephria)	6	...	...	...	...	...	...	...	...	...	...	...	2	3	...	1	...	...	...	Bright's Disease (Nephria)	
	Diabetes	3	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	..	Diabetes	
	Calculus	2	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	Calculus	
	Cystitis	1	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	1	...	...	Cystitis	
	Kidney Disease, &c.	1	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	*Kidney Disease, etc.*	
	ORDER 6.																				ORDER 6.	
	Ovarian Dropsy	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	Ovarian Dropsy	
	Uterus Disease, &c.	3	...	...	...	...	...	...	...	...	...	..	..	...	3	...	...	..	...	...	*Uterus Disease, etc.*	
	ORDER 7.																				ORDER 7.	
	Synovitis	2	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	Synovitis	
	Joint Disease, &c.	6	...	...	...	...	...	...	...	...	...	...	...	...	3	1	2	...	...	...	*Joint Disease, etc.*	
	ORDER 8.																				ORDER 8.	
	Phlegmon	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	Phlegmon	
	Ulcer	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	Ulcer	
	Skin Disease, &c.	1	1	...	...	...	...	1	...	..	...	...	...	...	...	...	...	...	...	...	*Skin Disease etc.*	
IV.	ORDER 1.																				ORDER 1.	IV.
	Premature Birth	8	8	...	...	...	...	8	.	...	...	...	...	...	...	...	...	...	...	...	Premature Birth	
	Cyanosis	1	...	1	...	...	...	1	...	...	..	...	...	...	...	...	...	...	...	...	Cyanosis	
	Spina Bifida	2	2	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	Spina Bifida	
	Other Malformations	3	3	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	Other Malformations	
	Teething	27	14	10	3	...	..	27	...	...	...	...	...	...	...	...	...	...	...	...	Teething	
	ORDER 2.																				ORDER 2.	
	Childbirth	3	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	Childbirth	
	ORDER 3.																				ORDER 3.	
	Old Age	62	...	...	...	...	...	...	...	...	...	...	...	...	...	2	17	34	9	...	Old Age	
	ORDER 4.																				ORDER 4.	
	Atrophy and Debility	79	57	9	1	...	...	67	...	...	...	...	...	2	...	6	4	...	..	...	Atrophy and Debility	
V.	ORDER 1. (ACCIDENT OR NEGLIGENCE).																				ORDER 1. (ACCIDENT OR NEGLIGENCE).	V.
	Run over on Railway	3	...	...	...	...	...	...	...	...	1	...	...	...	2	...	...	...	...	...	Run over on Railway	
	Run over in Street	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	Run over in Street	
	Killed by Lightning	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	Killed by Lightning	
	Drowning	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	Drowning	
	Crushed	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	Crushed	
	Burns and Scalds	4	...	2	...	...	1	3	...	...	...	...	...	...	...	...	1	...	...	...	Burns and Scalds	
	Suffocation	2	2	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	Suffocation	
	Fall	2	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	Fall	
	Exposure to Cold	1	...	...	..	...	...	...	...	...	...	...	1	...	...	...	...	..	...	...	Exposure to Cold	
	Accident (means not stated)	1	...	...	...	...	...	...	...	...	..	...	...	...	...	1	...	...	...	...	Accident (means not stated)	
	* ORDER 4. (SUICIDE.)																				ORDER 4. (SUICIDE.)	
	Drowning	3	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	Drowning	
	Hanging	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	Hanging	
	Means not stated	2	...	...	...	...	...	...	...	...	...	...	1	...	..	...	1	...	...	...	Means not stated	
	Sudden Deaths (cause unascertained)	15	3	1	...	...	...	4	...	...	...	...	2	2	4	2	1	...	...	...	Sudden Deaths (cause unascertained)	
	Causes not specified or ill-defined	3	...	..	...	...	...	...	...	...	...	...	1	1	1	...	.	...	...	...	Causes not specified or ill-defined	

* Order 2, comprising Violent Deaths in Battle; and Order 5, Execution, are omitted as inapplicable to Macclesfield.

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